REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

In the specification, paragraphs have been amended on pages 1 and 4.

Claims 1-9 have been canceled. New claims 19-30 have been added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 10-30 are now pending in this application. Method claims 10-15 have been withdrawn from consideration, but are believed to be rejoinable upon allowance of article claim 16.

Objections to the Specification

The specification is objected to for containing informalities. The specification has been amended to overcome the objections. Withdrawal of the objections is respectfully requested.

Prior Art Rejections

Claims 1, 2, and 4-9 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,749,514 (hereafter "Murakami et al."). Claims 1, 2, 4, and 8 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,485,858 (hereafter "Baker et al."). Claims 3, 5, and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Baker et al. Claims 6-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Baker et al. in view of U.S. Patent No. 5,277,996 (hereafter "Marchetti et al.").

Claims 1-9 have been canceled, thereby rendering each of the above-noted rejections moot. Withdrawal of these rejections is respectfully requested.

In regard to Murakami et al., the Office asserts that Murakami et al. would anticipate claim 5, which recited "wherein the interlayer distance between the planar molecular layers, on a condition that hydrogen is stored, is 0.8 to 1.2 nm." New claims 20, 24, and 26 include similar language. The Office asserts that Murakami et al. would inherently anticipate claim 5 because Murakami et al. uses the same materials as Applicant and therefore the resulting structure would have the same interlayer distance. See Office Action at pages 3-4.

However, Murakami et al. discloses that graphite intercalation compounds may be classified into one of two groups according to the interaction between the intercalant and the host graphite. See Murakami et al. at col. 1, lines 30-34. The first group exhibits a charge transfer between the intercalant and graphite, producing an electrostatic attractive force. See Murakami et al. at col. 1, lines 34-37. The second group exhibits covalent bonds. See Murakami et al. at col. 1, lines 37-39. Murakami et al. further discloses that covalent bond intercalants can include F and O (OH). See Murakami et al. at col. 2, lines 67-68. The covalent bond intercalants disclosed by Murakami et al. are not the same materials provided in the examples of Applicant's disclosure. Therefore, Murakami et al. does not inherently anticipate the language of claim 5.

Claims 16-18 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,294,276 (hereafter "Ogino"). This rejection is respectfully traversed.

Amended claim 16 recites a hydrogen storage tank, comprising: a hydrogen storage material comprising: graphite which is formed of a plurality of graphenes stacked and a particle which is inserted between the graphenes to define an interlayer distance between the graphenes and is chemically bound to the graphenes; and a metal tank body which houses the hydrogen storage material. Claims 17 and 18 include the features of amended claim 16.

Ogino discloses an electric vehicle 90 and a hydrogen generator supplier 10 that can receive a supply of city gas and that reforms the gas to provide hydrogen to the electric vehicle 90. See Ogino at col. 8, lines 57-59. The hydrogen generator supplier 10 includes an accumulator 55 that stores gaseous hydrogen under pressure. See Ogino at col. 12, lines 52-53. The electric vehicle 90 includes a fuel tank 92 for storing hydrogen supplied from the

hydrogen generator supplier 10. See Ogino at col. 8, lines 65-67. The fuel tank 92 includes a hydrogen storage alloy. See Ogino at col. 14, lines 55-59. Ogino discloses an electrolyte film 101 made of a polymer electrolyte material that includes platinum or platinum alloy applied as a catalyst to the surface of the electrolyte film 101 by preparing carbon powder with platinum or platinum alloy carried thereon. See Ogino at col. 17, lines 6-24. However, Ogino does not disclose "a hydrogen storage material comprising: graphite which is formed of a plurality of graphenes stacked and a particle which is inserted between the graphenes to define an interlayer distance between the graphenes and is chemically bound to the graphenes." Instead, Ogino discloses a polymer electrolyte film 101 with platinum or platinum alloy applied to the surface of the film 101 by carbon powder. Therefore, Ogino does not disclose all of the features of amended claim 16. Withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 3, 5, and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Baker et al. Claims 3, 5, and 6 have been canceled. Withdrawal of this rejection is respectfully requested.

Claim 3 recited "wherein the particle is chemically bound to the planar molecular layers." Amended claim 16 includes similar language. The Office asserts that it would have been obvious that the catalysts used by Baker et al. would be chemically bound to the carbon-containing compound disclosed by Baker et al. because the catalyst is reacted in a heating zone to produce the graphite. See Office Action at page 5. However, Baker et al. discloses that this catalyst is used to grow the graphite nanofibers, while the catalyst that the graphite nanofibers are used to support is introduced onto the graphite nanofiber surface by another technique, such as a wet dispersion technique that deposits the catalyst onto the nanofibers. See Baker et al. at col. 2, lines 20-27; col. 4, lines 10-12, 46-49; col. 6, lines 20-23, 39-46, 55-65; col. 7, lines 11-15. Baker et al. discloses that the catalyst supported by the nanofibers is deposited onto the nanofibers. Therefore, it would not have been obvious to one of ordinary skill that Baker et al. discloses or suggests that this catalyst would be chemically bound to the nanofibers.

Claims 6-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Baker et al. in view of U.S. Patent No. 5,277,996 (hereafter "Marchetti et al."). Claims 6-9 have been canceled. Withdrawal of this rejection is respectfully requested.

New Claims

New claims 19-30 have been added. Claims 19-30 depend from claim 16 and are allowable over the prior art for at least the reasons discussed above. Applicant submits that claims 19-30 recite features of a hydrogen storage tank not disclosed or suggested by the prior art. Applicant believes that the present application is now in condition for allowance, and requests rejoinder of method claims 10-15, upon allowance of claim 16. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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